

Abstract Submitted
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Exfoliation and Characterization of Ultrathin Graphite¹ ILANA ALBERT, Williams College — Ultrathin materials are well suited for application in thin and flexible electronics. In the Kealhofer lab at Williams College, we are developing a pump-probe experiment to examine phonon-phonon interactions in ultrathin materials such as few-layer graphene. This talk focuses on the techniques we use to exfoliate and characterize our samples. We micromechanically exfoliate the sample in order to produce graphene. To determine the thickness of these samples we use a combination of optical microscopy, atomic force microscopy, and a MATLAB script that uses Fresnel's equations. During our sample preparation process we transfer the sample from sticky tape to polydimethyl siloxane (PDMS) gel and then from the PDMS gel to a transmission electron microscope support that will be placed in the vacuum chamber for the experiment. The Kealhofer lab ultimately hopes to refine the sample preparation process in order to create a flake of graphene fit for use in the experiment.

¹Thank you to Professor Kealhofer and my lab mates

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